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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,532	10/21/2002	Richard Jonathan Langley	10681-007	3226

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EXAMINER

WIMER, MICHAEL C

ART UNIT PAPER NUMBER

2828

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/089,532

Applicant(s)

LANGLEY ET AL.

Examiner

Michael C. Wimer

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-26 is/are rejected.
- 7) ☒ Claim(s) 27-37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 21-26 is withdrawn in view of the newly applied reference(s) to Rasinger et al. (5365246). Rejections based on the newly cited reference(s) follow.
2. Claims 27-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 112

3. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 is deemed to be redundant because it recites the same clause already in its independent Claim 23 (lines 10-12) and thus this claim is not seen to further limit and is unclear.

It is suggested to change the dependency to Claim 24 and to delete "are shaped...such shaping" in lines 2-3.

4. Note: all claims once present in the application must be mentioned as to their present status. For example, on page 2 of the previous response, instead of merely Claim 20 indicated as canceled, it should be --Claims 1-20 (canceled)--.

Claim Rejections - 35 USC § 103

Art Unit: 2828

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasinger et al. (5365246).

Regarding Claims 21-24, Rasinger et al. show in Fig. 5, a dual-band microstrip antenna designed to operate on at least two resonant frequency ranges (see col. 3, lines 1-5), comprising a ground member 1 (col. 4, lines 19-24) of a rectangular outer profile, a patch structure with a first portion 9 and a second portion comprising a pair of patches 2 and 3, wherein the signal feedline 4,5 is connected to the first patch portion 9, and a shorting member extends from each second patch to the ground member, and the ends and edges of the patch and ground member are all aligned as recited. A skilled artisan recognizes as obvious that the feedline 4 is connected along a centerline of the patch portion 9, and thus defining a "generally central position on the first patch". Since Rasinger et al. suggest to make the portions 2,3,9 of different lengths in order to operate in different resonant frequency ranges. Additionally, it would have been obvious to the skilled artisan that there is EM interaction between the patch structure and ground plane member 1 and that the patch structures "are shaped to substantially correspond to patterns of current flow detected in the conduction

surfaces when the antenna is active before such shaping", because the artisan provides the shape to provide maximum radiation efficiency.

Regarding Claims 25 and 26, a skilled artisan would have found it obvious to vary the lengths and widths of the patch structure, as recited here, in order to provide the proper frequency ranges desired and efficient radiation along with proper impedance matching, particularly since no unexpected results are shown with respect to these parameters.

7. Applicant's arguments with respect to claims 21-37 have been considered but are moot in view of the new ground(s) of rejection.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun O. Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2828

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Wimer
Primary Examiner
Art Unit 2828

MCW
3/2/2005